

Board announced would be commenced by Prof. Hudson at King's College, Strand, on October 17, has been postponed until next term, and will begin on January 23, 1964.

At a special convocation of the University of Toronto on October 2, the following honorary degrees were conferred in connection with the opening ceremonies of the new physiological and medical laboratories:—LL.D. (*honoris causa*), Prof. W. W. Keen, Jefferson Medical College, Philadelphia; Prof. W. H. Welch, Johns Hopkins University; Prof. William Osler, F.R.S., Johns Hopkins University; Prof. R. H. Chittenden, Yale University; Prof. Charles S. Sherrington, F.R.S., University of Liverpool. *In absentia*, Prof. H. P. Bowditch, Harvard University. The inaugural address at the opening of the laboratories was delivered by Prof. Sherrington.

THE new buildings of the Essex County Technical Laboratories, Chelmsford, will be opened by the Earl of Onslow, President of the Board of Agriculture, on Friday afternoon, October 30. The buildings, which have just been completed at a cost of nearly 12,000l., comprise chemical, physical and biological laboratories and classrooms, together with agricultural and horticultural museums and libraries, and provide facilities for systematic instruction in agriculture and horticulture, as well as in pure science. The laboratories are intended to be a centre for agricultural and horticultural information for the whole county, and they include rooms for the analysis of soils, manures, foods, seeds, &c., and for other scientific work carried on in the interest of these industries.

IN reply to a memorial to the Board of Agriculture, asking that Ordnance maps might be sold at reduced prices for teaching purposes, the Geographical Association has been informed that the Board is prepared to authorise the Ordnance Survey Department to produce and supply to educational authorities a special edition of the outline 1-inch maps, printed on cheap but reasonably strong paper, at the following prices:—200 copies, 1l. 5s.; 500 copies, 2l.; 1000 copies, 3l.; 5000 copies, 12l. For larger numbers the estimated price would be 2l. per 1000 copies. The Board has stipulated that any maps thus supplied should not be sold, and a heading is to be printed on the maps to this effect. Referring to the educational advantages of the Board's decision, Dr. Herbertson, secretary of the Geographical Association, remarks:—"It is universally agreed that all sound geographical teaching must begin in a study of the home region, and it is therefore to be hoped that most teachers will avail themselves of the facilities so generously granted, either individually or by making application through the local education authority."

MUCH of the success of the Glasgow and West of Scotland Technical College could probably be traced to the widespread interest in its work shown by the Corporation of Glasgow, by Scottish manufacturers and merchants, and by the associations both of professional men and of artisans. The most recent annual report of the governors of the college provides many indications of the belief in the value of higher technical education by the inhabitants of Glasgow and its neighbourhood. The Corporation of Glasgow has made a grant of 5000l., of which 4500l. was towards working expenses and 500l. towards the building fund; many manufacturers and others have given facilities for visits to their works by parties of students, and many merchants have made additions to the college equipment or have supplied laboratory material. It is of interest to note that the total expenditure involved by the erection of the new buildings, the foundation stone of which was laid last May by the King, exclusive of equipment, will be not less than 210,000l. Of this sum the governors are able to announce promises of donations and grants amounting to 182,382l.

## SOCIETIES AND ACADEMIES.

### LONDON.

**Entomological Society**, October 7.—Prof. E. B. Poulton, F.R.S., president, in the chair.—Mr. G. C. **Champion** exhibited on behalf of Prof. Hudson **Beare** some specimens of a *Ptinus* new to the British list, captured in a granary at Strood on May 11, 1961.—Mr. C. O. **Waterhouse** exhibited on behalf of Mr. Charles **Pool** specimens of a beetle of the genus *Niphus*, closely resembling *N. crenatus*, but

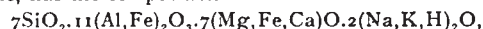
with distinct shoulders, and more parallel elytra which are less strongly striated. They were found in large numbers in a corn chandler's at Edmonton.—Mr. H. St. J. **Donisthorpe** exhibited specimens of *Aphanisticus emarginatus* from the Isle of Wight, a beetle new to the British list, and a *Scymnus*, new to science, from the same locality.—Mr. M. **Burr** exhibited a living adult male earwig, *Labidura riparia*, Pall., captured near Boscombe at the end of August. He said that the very noticeable pale coloration becomes darker after death, sometimes nearly black, which might account for some of the numerous "colour-varieties."—Dr. Norman **Joy** exhibited a specimen of *Argynnis selene*, taken last year in Berkshire, showing a remarkable tendency to melanism, and rare Coleoptera taken in the same county during 1963.—Sir George **Hampson** exhibited a collection of Norwegian butterflies made by him on the Dorsefjeld, on the Alten fiord, at Bossekop, and other localities this year, including series of *Colias hecla*, Lef., *Chrysophanus hippothoe*, and var. *stieberi*, Gerh., *Æneis norna*, Thnb., *Melitaea*, var. *Norvegica*, Auriv., the Norwegian form of *M. aurelia*, *Argynnis freiga*, and *A. frigga*, a Labrador, Arctic, and North American species, now found further south, at Kongsvold, for the first time.—Mr. A. H. **Jones** exhibited examples of *Erebia christi*, taken this summer in the Laquinthal, and of the species of *Erebia*, to which it is allied; a local form of *Satyrus actaea*, var. *cordula*, from Sierre; and a short series of *Chrysophanus doris* (type) and *C. var. subalpina* from the Laquinthal, with *P. hippothoe*, var. *eurybia*, showing the strong resemblance on the upper surface which the ♀ of this latter species bears to the ♀ *subalpina*.—Mr. A. J. **Chitty** exhibited specimens of *Procto trupid*, which he said approached *Ponera constricta* in appearance, but might be an *Isobrachium*. If so, it was new to the British list.—Mr. H. Willoughby **Ellis** exhibited *Criocephalus polonicus*, Motsch., a longicorn beetle new to Great Britain, from the New Forest, and also specimens of all stages, from the egg to the imago, to illustrate the life-history of the species. He also exhibited specimens of *Asemum striatum*, L., with larva and pupa, accounted heretofore rare in the New Forest, but this year occurring in abundance.—Mr. Ambrose **Quail** exhibited cases showing the life-history of some Australian Hepialidae.—Dr. D. **Sharp**, F.R.S., exhibited specimens illustrative of the egg-cases and life-histories of eight species of South African Cassididae, as described in a paper by Mr. F. Muir and himself.—Mr. W. L. **Distant** also showed the pupa cases of some African species of Aspidomorpha, with the cast heads of the larvæ.—Mr. Roland **Trimen**, F.R.S., exhibited some cases of mimicry between butterflies inhabiting the Kavirondo-Nandi district of the Uganda British Protectorate, particularly that in which *Planema poggei*, Dewitz, is imitated by an apparent variety of *Pseudacraea künowii*, Dewitz, and also by a hitherto undescribed form of the polymorphic ♀ *Papilio merope*, Cram. He mentioned that both *Planema poggei* and *Pseudacraea künowii* were described and figured by Dewitz in 1879 from single specimens taken by Dr. Pogge in Angola, and added the interesting fact that the only other example of the undescribed mimicking form of the ♀ *Papilio merope* known to him—in the Hope Department of the Oxford University Museum—is ticketed "Angola; Rogers, 1873." The president referred to the special interest attaching to an interpretation of this remarkable form of the female *merope*; at the same time he pointed out that the interpretation so convincingly illustrated that evening had been made out last spring by Mr. S. A. Neave, who exhibited this form of the female *merope*, together with *Planema poggei* as its model, at both *soirées* of the Royal Society in May and June, a time when Mr. Trimen's absence from England unfortunately prevented him from seeing them.—Dr. T. A. **Chapman** exhibited *Coenonympha oedipus*, *Satyrus dryas*, and *Heteropterus morpheus*, taken last summer near Biarritz, and *Erebia crias* and *E. stygne*, from the Logroño Sierra, Spain. These he suggested were probably examples of homöochromatism. Little attention has been directed to homöochromatism in European butterflies, and these were certainly not examples of the detailed mimetism we are now familiar with in Müllerian groups from the African

and neotropical regions.—Dr. **Chapman** also exhibited living imagines of *Crinopteryx familiella*. These had just emerged at Reigate, where they and their parents, descended from pupæ brought from Cannes in March, 1901, had lived out of doors during their active existence, being brought into the house only during their pupal aestivation. This seemed noteworthy in so southern (Mediterranean) a species. The experiment seemed quite likely to continue successful for the next generation.—Mr. Ambrose **Quail** read papers on the antennæ of the Hepialidæ and on *Epalxiphora axenana*, Theyr.—Mr. Gilbert J. **Arrow** read a paper on the laparostict lamellicorn Coleoptera of Grenada and St. Vincent, West Indies.—Mr. T. H. **Taylor** communicated notes on the habits of *Chironomus (orthocladus) sordidellus*.—Mr. F. Du Cane **Godman**, F.R.S., communicated descriptions of some new species of Erycinidæ.—Mr. W. L. **Distant** communicated additions to the rhynchotal fauna of Central America.—Dr. D. **Sharp**, F.R.S., read a paper on the egg-cases and early stages of some Cassididæ.

## PARIS.

**Academy of Sciences, October 12.**—M. Albert **Gaudry** in the chair.—The perpetual secretary announced to the Academy the death of Prof. Rudolf Lipschitz, correspondent for the section of geometry.—On the relations between the theory of double integrals of the second species and that of the integrals of total differentials, by M. Émile **Picard**.—On the temperature of inflammation and on the slow combustion of sulphur in oxygen and in air, by M. Henri **Moissan**. The temperature of inflammation of sulphur is 282° C. in oxygen and 363° in air, at atmospheric pressure. Sulphur dioxide can be detected after twelve hours at 100° C., giving a distinct quantity of solid at -186°.—Palæontological observations in Alaska, by M. Albert **Gaudry**. The abundance of mammoth remains near Yukon leads to the conclusion that at a far distant epoch the climate was far less severe than at present.—On the new function  $E_a(x)$ , by M. G. **Mittag-Leffler**.—The detection and estimation of urea in the tissues and in the blood of vertebrate animals, by M. Nestor **Gréhant**. The alcohol extract is evaporated at 50° C., the residue treated with nitrous acid, and the gases pumped out, the carbon dioxide being measured. Both the blood and muscles of mammals were found to contain urea, of birds, none.—On linear equations of finite differences, by M. Alf. **Guldberg**.—On the working of coherers, by M. Albert **Turpain**.—Contact electrification and the theory of colloid solutions, by M. Jean **Perrin**. If a substance in contact with water takes a strong electrification and small surface tension, the stable state of the system will be realised by an emulsion of granules of fixed diameter, dispersed in the water.—The action of carbonic acid under pressure on metallic phosphates, by M. A. **Barillé**.—On a series of bismuth compounds, by MM. G. **Urbain** and H. **Lacombe**. From an examination of the double nitrates, the author concludes that bismuth stands in the same relation to the rare earths as zinc does to magnesium.—On the estimation of vanadium in metallurgical products, by M. Em. **Campagne**. The metal is converted into chloride, the bulk of the ferric chloride removed by ether, and the vanadium converted into  $\text{VOCl}_2$  by evaporation with hydrochloric acid. This is converted into sulphate, and titrated with permanganate.—On the nitric esters of the alcohol-acids, by M. H. **Duval**. The preparation and properties of the nitrates of glycollic, malic, and glyceric acids are described.—The abnormal fixation of trioxymethylene on certain organo-magnesium derivatives, by MM. M. **Tiffenau** and R. **Delange**. The compound obtained by the action of magnesium upon benzyl chloride behaves abnormally with trioxymethylene, giving orthotolyl alcohol,  $\text{CH}_3\text{C}_6\text{H}_4\text{CH}_2\text{OH}$ , instead of the phenyl-ethyl alcohol,  $\text{C}_6\text{H}_5\text{CH}_2\text{CH}_2\text{OH}$ , which might have been expected. The magnesium compound, however, possesses the normal constitution,  $\text{C}_6\text{H}_5\text{CH}_2\text{MgCl}$ , as is shown by the production of phenylacetic acid by the action of carbon dioxide.—The action of mixed organo-magnesium compounds upon amides: a new method for the preparation of ketones, by M. Constantin **Béie**. When an amide is heated on the water bath with an excess of an organo-magnesium compound, and the product treated with water, ketones are produced. Methyl-ethyl-ketone, diethyl-ketone, methyl-

propyl-ketone, isobutyl-ethyl-ketone, acetophenone, and phenyl-ethyl-ketone have been prepared by this method, which appears to be of general application.—On the oscillatory movements of *Convoluta roscoffensis*, by M. Georges **Bohn**.—On the vegetative apparatus of the yellow rust of cereals, by M. Jakob **Eriksson**.—The necessity of a microbial symbiosis for obtaining a culture of the Myxomycetes, by M. **Pinoy**.—On a new mineral species, by M. A. **Lacroix**. The mineral, which is named grandierite, has the composition



and is one of the most basic silicates known. It was found in South Madagascar.—On the Turonian of Abou Kouch (Egypt), by M. R. **Fourtau**.

## DIARY OF SOCIETIES.

FRIDAY, OCTOBER 23.

PHYSICAL SOCIETY, at 5.—The Bending of Magnetometer Deflection-Bars: Dr. C. Chree, F.R.S.—On the Magnetism of Basalt and the Magnetic Behaviour of Basaltic Bars when Heated in Air: Dr. G. E. Allen.—Some Experiments with Electrical Oscillations: Dr. W. Watson.

SATURDAY, OCTOBER 24.

ESSEX FIELD CLUB.—Annual Cryptogamic Meeting at High Beech, Epping Forest; Referees: Dr. M. C. Cooke and Mr. George Massee.

SATURDAY, OCTOBER 31.

ESSEX FIELD CLUB, at 6.30.—Exhibition of a Series of Photographs of Fungi, by means of the Lantern: Mr. Somerville Hastings.—Seed Dispersal: Prof. G. S. Boulger.

## CONTENTS.

	PAGE
Ancient Calendars. By W. T. L. . . . .	593
Physiological Chemistry. By Prof. W. D. Halliburton, F.R.S. . . . .	594
Popular American Entomology . . . . .	595
Our Book Shelf:—	
“Catalogue of Books, Manuscripts, Maps, and Drawings in the British Museum (Natural History).” R. L. . . . .	596
Mudge and Maslen: “A Class Book of Botany” . . . . .	596
Perrin: “Traité de Chimie physique, Les Principes” . . . . .	597
Timpany: “The Arithmetic of Elementary Physics and Chemistry” . . . . .	597
Miron: “Gisements minéraux. Stratigraphie et Composition” . . . . .	597
Letters to the Editor:—	
Human Science and Education.—Prof. P. Gardner . . . . .	597
Uniformity in Scientific Literature.—Prof. G. H. Bryan, F.R.S. . . . .	598
Expansion Curves. (With Diagram.)—Prof. Alfred Lodge . . . . .	599
Rocket Lightning. (Illustrated.)—Prof. J. D. Everett, F.R.S.; W. H. Everett . . . . .	599
Our Winters in Relation to Brückner's Cycle. (With Diagram.)—Alex. B. MacDowall . . . . .	600
An Ant Robbed by a Lizard.—J. W. Stack . . . . .	600
A New Mechanical Theory of the Æther. By Prof. G. H. Bryan, F.R.S. . . . .	600
The Effect of Education and Legislation on Trade. By Dr. F. Mollwo Perkin . . . . .	602
Notes . . . . .	603
Our Astronomical Column:—	
Search-Ephemeris for Comet 1896 v. . . . .	606
A Novel Feature for Geodetical Instruments . . . . .	606
The Path of Comet 1894 I. (Denning) . . . . .	606
Observations of Mars . . . . .	606
Natal Government Observatory . . . . .	607
Inheritance of Psychological and Physical Characters in Man. By Prof. Karl Pearson, F.R.S. . . . .	607
The Application of Low Temperatures to the Study of Biological Problems. By Dr. Allan Macfadyen . . . . .	608
Physics at the British Association. By Dr. C. H. Lees . . . . .	609
Chemistry at the British Association . . . . .	611
Geology at the British Association. By H. W. M. . . . .	612
Zoology at the British Association . . . . .	614
University and Educational Intelligence . . . . .	614
Societies and Academies . . . . .	615
Diary of Societies . . . . .	615